

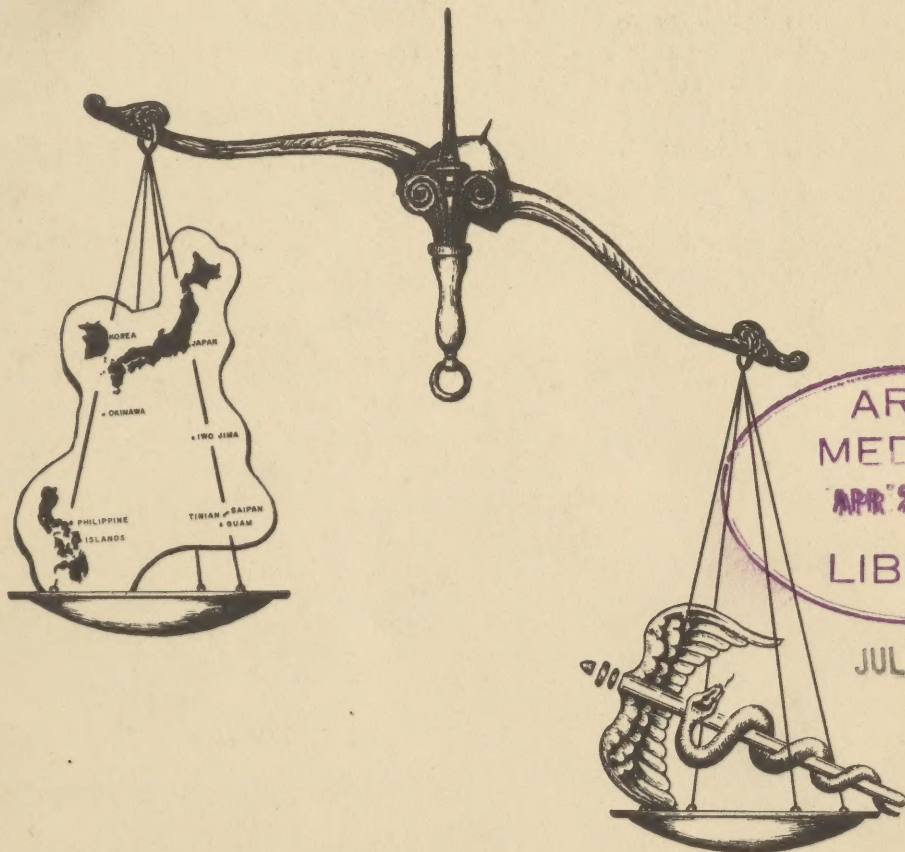
RESTRICTED

DOCUMENT SECTION

MED SEC GHQ FEC

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VOL IV NO 4
1 APR 1949

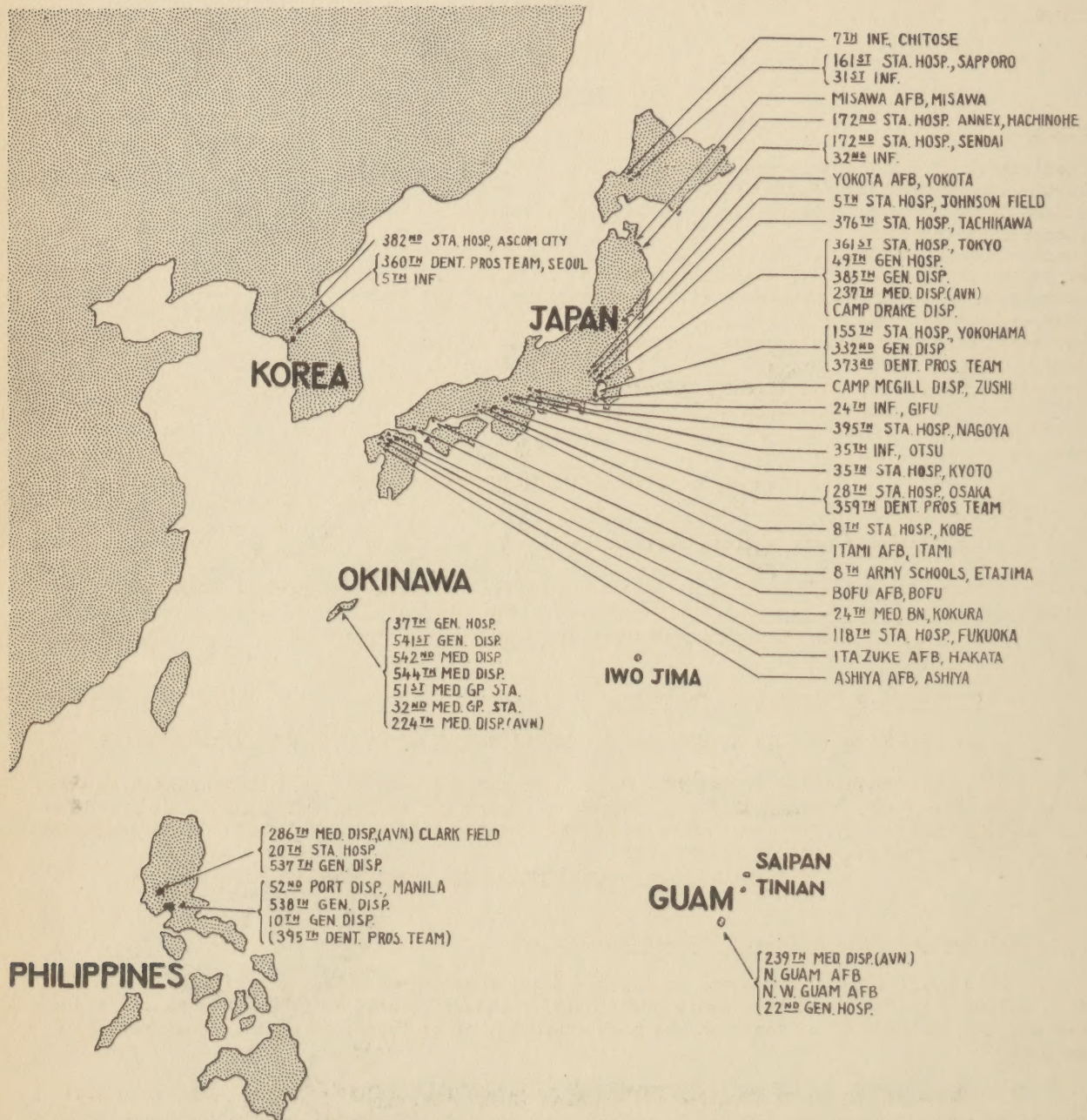


A FAR EAST PERIODICAL OF MEDICAL DEPARTMENT INFORMATION

SURGEON'S CIRCULAR LETTER

RESTRICTED

DENTAL INSTALLATIONS, FEC



The following installations receive itinerant dental service: Japan - 19th Infantry, Beppu; 21st Infantry, Kumamoto; Tokyo QM Depot, 8th Army Stockade, Tokyo Area; Engineer School, Maisuru; Miho AFB, Miho. Korea - Kimpo AFB. Saipan - 53rd Station Hospital. PHILCOM - 46th Station Hospital, Bagiuo. One officer divides time between 128th Station Hospital and 4th Replacement Depot, ZAMA, Honshu. Full time service not shown on map includes 34th Infantry, Sasebo, and 1503rd AT Wing, Haneda.

GENERAL HEADQUARTERS
FAR EAST COMMAND
MEDICAL SECTION

SURGEON'S CIRCULAR LETTER

APO 500

NUMBER. 4

1 April 1949

PART IADMINISTRATIVE

<u>SUBJECT</u>	<u>SECTION</u>
Organization of the Medical Section.	I
Overtreating Dermatology Patients.	II
Medical Corps Officers - Attention	III
Cutaneous Diphtheria	IV
Japanese B Encephalitis.	V
New TB MED on "Management of Venereal Diseases".	VI
Future Consideration for Promotion of 1st Lieutenants, MC and DC	VII
Neuropsychiatric Form.	VIII
Army Nurse Corps and Women's Medical Specialist Corps, Regular Army.	IX
Women's Medical Specialist Corps Officer Procurement Program	X
Special Food Items for Patient Feeding	XI
Modification in Permanent Filing of Register of Dental Patients.	XII
Recent Department of the Army and FEC Publications	XIII
Index.	Inside Back Cover

I. Organization of the Medical Section

There were no changes in commissioned personnel currently assigned or attached to the Medical Section during the period covered by this publication.

II. Overtreating Dermatology Patients

The following is an extract from the Annual Report of the 361st Station Hospital:

"Patients received at this hospital often had received initial treatment at other medical installations, but too often the treatment proved irritating, and resulted in prolonged hospitalization. Our biggest problem has been the treatment of contact dermatitis following the use of Benzyl Benzoate Emulsion for Scabies."

III. Medical Corps Officers - Attention

We will soon be suffering in the Far East Command from an acute shortage of doctors. It is believed that at that time every effort will necessarily have to be made to reduce the work-load and, at the same time, carry on the high standards of professional work that we have done in the past.

It is not believed that any definite rules can be laid down because each case will have to be considered on its individual merits, and it is not the policy of this headquarters to do anything to interfere with the professional judgment of our doctors. However, it is believed that under existing regulations much can be done. The following suggestions are offered:

1. Consolidation of hospital and dispensary work as much as possible.
2. The possibility of closing some dispensaries, and even hospitals, where other facilities are near enough to take care of the work-load.

3. When a doctor sees a patient in the dispensary, it is believed that in the majority of instances he can treat this case himself rather than refer it to a specialist in the hospital. This is one of the most important suggestions. The out-patient work of many of our hospitals is enormous and is not appreciated by the dispensary doctors. It is believed that the dispensary doctors could handle 75% of the cases that are now referred to hospitals for consultation.

4. Elective surgery should be reduced enormously. This especially applies to dependents with chronic, long-standing gynecological conditions that can easily wait until they return to the ZI.

5. Some operations of questionable value are still being done in the command such as varicocele, undescended testicles, and arthrotomies.

6. In this same connection, operations such as gastro-enterostomies, gastric resections, and even thyroidectomy, might best be done in the ZI.

7. Such conditions as acute hepatitis, acute rheumatic fever, and coronary heart diseases should be returned to the ZI as soon as they are able to travel without danger to their physical condition.

8. It is believed that the patient load in hospitals could best be reduced by evacuating patients to the ZI more promptly. The 120-day evacuation policy does not mean that the patient will be hospitalized for 120 days in the Far East Command and then evacuated. It is believed that the vast majority of patients to be evacuated under the 120-day policy could be evacuated on the first available transportation after they are admitted to the hospital.

9. It is possible that we are retaining many fracture cases that might be evacuated in a plaster cast at a much earlier date than we are now doing it. As an illustration, transverse fractures of the tibia that are in good position and in a well-fitting cast. The same might apply to many fracture cases around the ankle joint where their return to duty in 120 days is questionable.

The above illustrates some of the things we will have to do to reduce the work-load. However, it is to be emphasized again that no hard and fast rule can be laid down. The individual merits of the case and the professional opinion of the doctor must always be considered. On the other hand, the overall work-load of the theater must also be considered.

V. Cutaneous Diphtheria

On his recent visit to the Far East Command as Consultant in Pathology, Dr. A. A. Liebow of Yale reemphasized (1) the great frequency of unrecognized cutaneous diphtheria in the tropics and (2) the fact that nasopharyngeal diphtheria is often overlooked in both temperate and tropical climates. In the tropics the most innocuous appearing skin lesion can be invaded by virulent diphtheria organisms. Many of the so-called tropical ulcers in natives are due to cutaneous diphtheria.

Too frequently nasopharyngeal exudative lesions are inadequately studied bacteriologically. The symptoms often are attributed to concomitant streptococcal infection. The diagnosis of diphtheria becomes apparent only when acute myocarditis develops (5% of cases), often followed in 2 - 4 months (20% of cases) by palatal, extraocular muscle, or facial paralysis, peripheral neuropathy, and elevated spinal fluid protein with albumino-cytologic dissociation. The above sequelae are not infrequent following cutaneous diphtheria.

TB MED 143 and Change 1 point out that no single cutaneous lesion is pathognomonic of diphtheria. The cutaneous ulcer which is relatively deep, rounded and punched out, and in early stages shows a grayish, yellowish, or brownish-gray membrane is one of the early diagnostic signs. When the membrane is present it can be peeled off in patches, leaving a clean hemorrhagic base. This base dries quickly and tends to form a leathery covering. After a few days this leathery slough separates and leaves a relatively clean base. Old lesions tend to become anesthetic to pin prick. Healing is from the periphery and the exact central portion is the last to heal. Barksdale and Tigertt¹ have pointed out common errors in the diagnosis of diphtheria. They adequately covered the laboratory diagnosis. Further information is given in TB MED 143 and Change 1, and in paragraph 306, TM 8-227.

¹W. L. Barksdale and W. D. Tigertt, FEC Surgeon's Circular Letter No. 8, 1 Aug 1947.

When it is decided after careful epidemiological and clinical consideration that a patient probably has cutaneous or faucial diphtheria, antitoxin should be given without delay, without waiting for cultural proof. Saline and penicillin packs are effective for cutaneous lesions. Suspicious cultures should be air mailed to the 406th or 3rd Medical General Laboratory for confirmation. Normally acute uncomplicated cases should not be reported as diphtheria without adequate laboratory confirmation.

V. Japanese B Encephalitis

Although the Japanese B encephalitis season is still several months in the future, it is necessary that plans for the control and prevention of this disease be formulated at an early date. To this end, as in the past, this year chief reliance for prevention must be placed upon mosquito control. Responsible medical officers should take the necessary action to discharge their responsibilities in connection with this control program. In addition to these measures, it is contemplated that Japanese B vaccination will again be accomplished for occupation personnel in Japan, Korea and Okinawa during the late spring and early summer, and in Guam during the late summer and early fall. Instructions concerning the vaccination program have been forwarded to the major commands. These do not differ significantly from those in effect during the 1948 season. Resume of this information will be published in an early issue of the Surgeon's Circular Letter.

VI. New TB MED on "Management of Venereal Diseases"

Attention is drawn to the recently published Department of Army Technical Bulletin, TB MED 230, dated 6 January 1949, subject: MANAGEMENT OF VENEREAL DISEASES. The forward to this technical bulletin is quoted as follows:

"This publication outlines the administrative and professional management of individuals acquiring venereal disease, and contains information on gonorrhea, syphilis, chancroid, lymphogranuloma venereum, and granuloma inguinale.

"With new information concerning penicillin and other antibiotic agents accumulating so rapidly, the final word cannot be written and there may be necessity for revision to maintain an up-to-day technical publication of this nature. However, the information herein represents the best current thought on the subject."

This bulletin combines for the first time information concerning the management of the major venereal diseases into one publication. It is recommended that all medical officers become thoroughly familiar with the contents of the publication as soon as possible.

TB MED 230 superseded TB MED 48, 31 May 1944, including C-2, 12 September 1944, and C-3, 13 November 1945; TB MED 157, April 1945, including C-1, 17 December 1946; TB MED 196, 20 August 1945; and TB MED 198, 20 August 1945, including C-1, 21 November 1946.

VII. Future Consideration for Promotion of 1st Lieutenants, MC and DC

For eligibility purposes in consideration for temporary promotion, all first lieutenants, MC, were required to have date of rank no later than 1 January 1948, per WCL 28461, dated 11 December 1948.

Officers of the 13th Basic Officers Class, Medical Field Service School (January - February 1948) graduated with date of rank of 12 January 1948, and they would have been ineligible for promotion under above provisions for lack of 11 days service.

Authorization was requested by CINCFE to the Department of the Army to submit recommendations for promotions to grade of Captain for all eligible MC and DC officers immediately upon completion of one year service in the grade of first lieutenant.

Reply received from the Department of the Army informed that AUS officers who came on duty in January and July of 1948 will be considered for temporary promotion as early as practicable following selections now in process provided sufficient vacancies exist at that time.

VIII. Neuropsychiatric Form

The following Neuropsychiatric Form, prepared by the Neuropsychiatric Section of the 37th General Hospital (PS), APO 331, is used for both civilian and military cases.

FROM _____

REPORT ON CASES REFERRED TO THE NEUROPSYCHIATRIC CLINIC
By Company Commander and/or Dispensary Physician

DIRECTIONS: In all cases of patients sent to the hospital for admission to the NP service (except neurological cases) and in all cases referred to the NP clinic when at all possible and practicable this form must be completed and sent in a sealed envelope to the NP clinic. In emergencies it should be completed and forwarded by messenger as soon after patient is admitted or referred as possible. The information received from this questionnaire is essential to an accurate determination of the mental and emotional status of the patient.

Name	ASN	Grade	Organization
1. <u>General Physical Ability and Endurance:</u> Any awkwardness in drill or exercises, tremors, excessive fatigue, etc:			

2. General Demeanor:
Initiative, cooperativeness, attentiveness, resentfulness to discipline, inability to be disciplined, insubordination, any minor infractions, any company punishments, criminal tendencies, lack of respect for or defacement of property, AWOL, reaction to changes in duty, reaction to dangers, reaction to complicated and technical procedures and duties, too frequent requests for furlough or passes, etc.:

6. Health:
General health, excessive or special physical complaints, too frequent appearances at sick call, unconscious or convulsive disorders, VD, etc.:

7. Emotional Reactions:
Shyness, timidity, tearfulness, fearfulness, irritability, seclusiveness, sulkiness, chronic homesickness, depression, elation, anti-social attitudes, over-holsterousness, suspiciousness, anxiety, delusions or hallucinations, etc.:

8. Precipitating Events:
First indications that soldier was sick, incompetent or inefficient, special circumstances when symptoms or break with reality became evident, if known:

2. Continued:

3. General Behavior:
Sociability, dependability, carelessness, over-cautiousness, carefulness, chronic complaining, any uncleanness, unusual obscenity, over-aggressiveness, any queer or odd behavior or unusual behavior (if so, specific):

4. Habits:
Sleep walking, sleeplessness, bed wetting, unusual sex practices, alcoholism, suspected drug addiction, use of recreational facilities, appetite, etc.:

5. Intelligence:
Army Classification Test score, general estimate of intelligence, common sense, ability to translate and transmit orders, any special lacks in regard to technical procedures, etc.:

9. Additional Remarks and/or Summary:
To include CC's opinion as to the most desirable disposition:

10. Nature of duties (in detail) required of patient if returned to duty:

11. Dispensary Physician's Tentative Disposition:
May include physician's opinion as to most desirable disposition:

Signed _____

NOTE: This form is to be used for civilians as well as soldiers. Appropriate superior will be contacted if at all possible for the information.

IX. Army Nurse Corps and Women's Medical Specialist Corps, Regular Army

Applications are being received for appointment in the Army Nurse Corps and Women's Medical Specialist Corps, Regular Army, for Reserve nurses and women medical specialists who are on extended active duty and under 28 years of age. Nurses and women medical specialists in this category should be encouraged to apply under the pertinent provisions of AR 605-20. The Department of the Army has prepared legislation for presentation to the 81st Congress which, if approved, will provide for the appointment in the Regular Army of nurses who served during World War II and who now exceed the age of 28 years.

X. Women's Medical Specialist Corps Officer Procurement Program

Special Regulations 605-60-50, 4 February 1949, announce the Department of the Army procurement programs established to provide professional graduate training to selected graduates of colleges and universities acceptable to The Surgeon General who desire a career in the Regular Army, Women's Medical Specialist Corps. Initial applications should be forwarded direct to The Surgeon General so as to arrive not later than 1 April 1949.

XI. Special Food Items for Patient Feeding

Basic authorities for obtaining special food items for patient diets, including infant patients are cited as follows:

Paragraph 25, WD Circular 120, 1947, as amended by Section 3, DA Circular 74, 1947, which states that: "Patient messes of numbered medical units or organizations and divisional clearing elements will be issued a hospital field ration in kind, consisting of the components of the field ration augmented by the additional quantity of special items considered essential by the Surgeon in preparing special diets. The ingredients necessary to prepare patient menus will be requisitioned and issued on an item basis."

CINCFE radio ZX 31599 to all major commands: "Department of the Army radio WCL 24549, 25 November current, is quoted in part for your information and compliance: 'Provisions of paragraph 25, Circular 120, 1947, as amended by Section 3, DA Circular 74, 1947, authorizes hospitals to requisition from the Quartermaster special food items as necessary for patient feeding. OQMG concurs in this interpretation and has indicated that food items for infant feeding, including special reinforced cereals, puree vegetables and fruits, are available. Such food items should be requisitioned per authority of above cited directives and practice of providing such foods at individual expense of parents should be discontinued'."

The authorities cited above should be sufficient to enable hospitals and other installations providing facilities for patient feeding to obtain special food items from major command QM's. In augmentation of the policies above enumerated with reference to infant feeding, arrangements have been made with the Quartermaster to have all major command QM's stock the following special milk food items for infant feeding:

- Lonalac - 1 lb. tins or equivalent - especially designed for use in diets requiring restricted sodium content.
- Olac - 1 lb. tins or equivalent - for feeding of premature and newborn infants deprived of breast milk.
- Caseo - 1 lb. 14 ob. tins or equivalent - for the treatment of diarrheas of infancy.
- Pectin-Agar in Dextri-Maltose - 1 lb. tins or equivalent - for infant diarrheas.
- Mull-soy or Sobee - 1 lb. or equivalent - for allergic infants who cannot tolerate milk.

Requirements for additional special items required for patient feeding, either adult, child, or infant, should be requisitioned from the local command quartermaster.

XII. Modification in Permanent Filing of Register of Dental Patients

The attention of all Dental Officers is called to a modification in the permanent

filing of Register of Dental Patients, AG Form No. 8-116, as outlined in C-4, AR 40-1010, dated 31 December 1948.

At the end of each calendar year, the permanent file will be cut off and a new permanent file started on 1 January of each year. A permanent file that has been cut off will be retained for one additional year.

Should a dental patient subsequently apply for further treatment, his previous register card will be withdrawn from the permanent file, or the cut-off permanent file, as the case may be, and placed in the current file.

A cut-off permanent file will be retained one year and then retired to The Adjutant General, Washington 25, D.C., Attention: Personnel Information Branch, in the case of Army Medical and Dental installations and activities, and to the Chief of Staff, United States Air Force, Washington 25, D.C., Attention: Personnel Records Service, in the case of Air Force Medical and Dental installations and activities: Through Central Records Depot No. 4, Bookl Bldg, No. F 121-1, APO 343.

The cut-off permanent file for 1948 will be retired on 1 January 1950 under this change.

XIII. Recent Department of the Army and FEC Publications

- AR 40-1010, DA 31 Dec 48, Change 4, Dental Reports, Returns and Records, Par 3 c(2). (See Sect XII, above)
- AR 625-5, DA, 25 Jan 49, WAC, Sec II, Par 17, Maternity Care; Sec IV, Par 22, Physical Standards
- AR 40-1705, DA, 3 Feb 49, C-2, Medical Supplies. This change supersedes Change 1
- AR 615-360, DA, 2 Feb 49, C-3, Par 7 e and f, added. Air Force Personnel on Duty with the Army (that is, hospitalized in Army hospitals) who are to be processed for discharge under provisions of AR 615-361
- AR 345-105, DA, 3 Feb 49, Historical Reports. Par 2 a (6) Medical Units
- AR 615-361, DA, 23 Feb 49, C-3, Discharge: Medical. Pars 1, 10, 17, 19 amended - supersedes C-2
- DA CIR 19, 7 Feb 49, Sec I. Conversion of Positions for Warrant Officers. (DA Cir 298, 1948, amended; DA Cir 383, 1948, rescinded. Sec IV, Medical Department Items)
- DA BUL 2, 2 Feb 49, Sec IV, Armed Services Medical Procurement Board - established 28 Oct 48
- DA G.O. 4, 17 Jan 49, Sec IV. William Beaumont General Hospital, Texas - designated Class II Installation
- SR 140-310-25, 31 Jan 49, Organized Reserve Corps, Application for Recall to Extended Active Duty. Sec II - Physical Exam
- SR 385-105-2, 10 Feb 49, Safety: Standard Operating Requirements. Sec II Sanitary Conveniences; Par 6, Water Supply; Par 7, Waste Disposal; Par 8, Washing Facilities; Par 9, Toilet Facilities
- SR 52-10-10, 14 Feb 49, Radioactive Isotopes and Other Dangerous New Chemicals
- TB MED 230, 6 Jan 49, Management of Venereal Diseases (See Sect VI, this issue)
- TB MED 231, 6 Jan 49, Prevention of Spread of Tuberculosis in Army and Air Force Hospitals
- TB MED 229, 18 Jan 49, Sanitary Control of Water Supplies for Fixed Installations
- T/O&E 10-167, 7 Dec 48, Quartermaster Laundry Company (Semi-mobile), Sec III
- T/O&E 6-85, 5 Jan 49, Field Artillery Battalion, 4.5-Inch Rocket, Truck Drawn. Sec II B Medical
- T/O&E 8-581, 11 Jan 49, Evacuation Hospital, Semi-mobile
- T/O&E 8-581, C-2, 11 Jan 49, Evacuation Hospital, Semi-mobile (400 Bed Capacity)
- Med Dept Equipment List No. 14, Sep 48, Hospital Train
- Med Dept Equipment List No. 27, Oct 48, 9-314-850 Mobile Army Surgical Hosp Med Equipment, 60 bed
- Med Dept Equipment List for Medical Training Center, No. 20, Nov 48, Supersedes Med 10-21, 31 Jan 45,

including C-1

Med Dept Equipment List, Nov 48, Veterinary General Hospital Medical Equipment List, etc
GHQ FEC CIR 1, 1 Jan 49, Non-appropriated Funds. GHQ FEC Cir 76, 1 Jul 47, rescinded
GHQ FEC CIR 2, 6 Jan 49, United States Army Hospital Funds. GHQ FEC Cir 60, 29 May 47, rescinded
GHQ FEC CIR 14, 25 Feb 49, Birth Certificates and Registration of Births
GHQ FEC CIR 15, 25 Feb 49, Maintenance of Medical Department Property and Equipment

PART II

TECHNICAL

SUBJECT

SECTION

Experience with Venereal Disease.	XIV
Comparative Studies on Mailed Spinal Fluid Specimens.	XV
Proposed Oral Thermometer Technique	XVI
Diagnosis of Malaria.	XVII
Complications as the Result of Appendectomies Observed at the 49th General Hospital . . .	XVIII

XIV. Experience with Venereal Disease by Captain John P. Muhleisen, MC, 28th Station Hospital, Osaka, Japan



As we are all aware, venereal diseases are very prevalent. As a cause of hospitalization they are outnumbered only by the Common Respiratory Infections. This situation has resulted in considerable investigation and worry on the part of Commanding Officers, who, realizing the number of days lost from duty, the possibility of prolonged incapacitation, as well as the moral implications, have tried many varied approaches to lower the incidence. Basically the problem is one of trying to curb the adventuresome spirit of young men and direct their activities along lines which are morally acceptable. On the other hand we have, roaming the streets and in close proximity to the camps and recreation areas, many young Japanese girls, who, desirous of money, food, or items of clothing, resort to prostitution. Various checks made on these pick-ups disclose the presence of venereal disease in 80-85% of the women examined. Among the Japanese population in Osaka during 1947, 19,000 cases of gonorrhea and 11,000 cases of syphilis were treated.

During the year approximately 500 patients were admitted to the Venereal Disease ward. As we will see later, not all of these cases were those of V.D. but represented as well other conditions in which the possibility of a venereal disease had to be ruled out.

The average patient was found to be 19.8 years of age, a young age to be treated for a venereal disease, but which is to be expected since the majority of our occupation personnel is made up of men of a similar age group.

Going further into statistics we find that about 85% of the patients admitted that they had been drinking on the night of exposure. Knowing the effect of alcohol upon the sensorium and its ability to lower inhibitions and break down moral standards we can understand that some of the infections might not have occurred had the men been sober. Further questioning brings out the information that the men had had an average of 13 contacts before developing the infection. Truly an unlucky number. Some poor unfortunates stated that the contact which resulted in hospitalization was the first that they had ever had. One person out of every 4 or 5 has had treatment for a previous venereal disease. A goodly number of the patients are guilty of other offenses, the court-martial rate and board proceedings being higher on the V.D. ward than on any other ward in the hospital. Finally physical examination reveals that the great majority of these patients have not been circumcised, a hygienic factor which definitely provides a good culture site for the venereal pathogens.

SYPHILIS -- One hundred and ninety new cases of syphilis have been treated. This includes the primary, secondary, latent and tertiary types as well as syphilitic relapses. PRIMARY STAGE - One hundred and twenty-eight positive darkfield examinations were observed. As is expected, the great majority of these positive reports came from lesions present on the genitalia. However,

there were two cases of abdominal chancre and ten cases of primary chancre of the lip. The classical description of the Hunterian chancre, that is a single indurated, non-painful ulcer with or without the presence of regional adenopathy is still an important guide to follow in the clinical diagnosis of syphilis. On several occasions the Treponema organisms were obtained from insignificant appearing lesions so that any particular lesion was declared non-luetic only when accompanied by negative microscopic and serologic findings. On the lip we have found the chancres following the popular description even to a greater degree of accuracy than when present on the genitalia. In every case treated here the ulcer was deep, indurated, non-painful and accompanied by a large, firm, movable cervical gland; in every instance the initial serology was positive.

In several instances the diagnosis of primary syphilis was made, not by the presence of a positive darkfield examination, but by the development of a positive serology and rising titer in an individual under observation for a penile ulcer. The diagnosis was delayed in these cases either because the lesion was healing or secondarily infected, or because the individual had been applying one of the various ointments to the ulcer prior to reporting to the clinic.

Other diagnoses of primary syphilis were made in individuals presenting a regional inguinal lymphadenopathy accompanied by a rising serologic titer. Healed ulcers were found in some patients, but occasionally the swollen gland was the only sign present. I believe the diagnosis is justified in such instances since it is possible for the chancre to be so transient and small as not to be noticed or cause permanent histological changes, or for the initial lesions to be present in an intraurethral location and asymptomatic.

Seventeen cases of secondary syphilis have been treated. The secondary rash has been found to be of the maculopapular type for the most part. The skin over the palms and soles was not involved in two instances. Generalized lymphadenopathy was present in every case that presented a rash, but we treated two patients in which the reverse was not true. In one case a syphilitic iritis accompanied the rash. Every patient with secondary syphilis had a positive serology upon admission substantiating the observation of others along this line.

The diagnosis of latent syphilis has given rise to most of the worries encountered by our staff, since the only finding is that of a positive serology. The history of previous treatment for gonorrhea, or a penile lesion with inadequate serologic follow-up often provides a clue to the presence of syphilis. When this information is not forthcoming a more detailed and time-consuming investigation must be performed. This will be discussed more fully in a few minutes.

Little did I think one year ago that I would ever see cases of tertiary syphilis while in the Armed Forces, yet 5 patients have been evacuated to the ZI thus far with findings of late syphilis. Four of the patients were found to have asymptomatic neurosyphilis, the last case having syphilitic aortitis and aortic regurgitation. Three of the cases of neurosyphilis had had previous treatment. One of these had intensive heavy metal and penicillin therapy, and in addition several courses of malaria paroxysms.

Five cases have been treated for syphilitic relapse. In every case there has been a progressive rise in the serologic titer. One patient was admitted with a papular rash and in one, peri-anal condylomata were noted from which spirochetes were isolated. All of these cases had been treated with penicillin four of the five having received the chemotherapy about one year prior to being readmitted. The fifth case (the patient with condylomata) had been treated in Italy in 1945. With the exception of this last case I am not convinced that the possibility of reinfection rather than relapse could have taken place. The patients admitted having had sexual contacts after the initial treatment, none had following the instructions to have monthly serologies drawn, and all were reticent about giving true histories for fear of being sent to a rehabilitation center or reduced in rank.

Various routines in the administration of penicillin have been recommended by The Surgeon General's Office in the past twelve months; in fact the dosage schedule has been altered three times, the last change being the introduction of penicillin in beeswax. Other than continuous intravenous or intramuscular drip, which are impractical on a large scale, this mode of administration is considered the best in providing the patient with a continuous effective circulating blood level of penicillin. As well, if the excretion of penicillin via the urinary tract is slowed by restricting fluids and/or the administration of small amounts of sodium chloride it is conceivable that that circulating level of this drug may be raised even higher. With penicillin the spirochetes disappear from all lesions in only a few hours. The chancres heal rapidly. In primary cases the serology returns to negative as a rule within nine months of treatment, if not sooner. The appearance of a Herxheimer reaction occurs in the majority of instances of primary and secondary syphilis. The highest temperature observed during such a reaction was 104.8 degrees Fahrenheit. The longer

the luetic ulcer has been present before diagnosis, the greater are the chances of the individuals experiencing a reaction. As will be stressed later, the present use of penicillin is accompanied with inherent dangers, particularly as regards the future course of the disease.

GONORRHEA -- One hundred and thirty-two cases of gonorrhea were diagnosed in the V.D.clinic. The source of these admissions was from our own Medical Detachment and Technicians' School, transfers from other wards in the hospital and treatment problems from other installations. Most of the gonorrhea in Army practice is treated in the unit dispensaries. Four patients entered the hospital with acute unilateral epididymitis. Penicillin therapy is specific for gonorrhea. Patients have been referred to the hospital with cases which were thought to be penicillin resistant. This has not been substantiated; to-date no one has reported the isolation of a penicillin resistant strain of Neisseria. Continuance of a urethral discharge after penicillin is given is usually due to invasion of the urethra or prostate with secondary pathogens. It is also conceivable that faulty technique in administering or storing the penicillin may result in its inactivation so as to be useless in the treatment of any infection much less gonorrhea. I am convinced that much of the trouble encountered with the development of chronic persistent urethral discharges would be prevented if an interval of two weeks were allowed between treatment and the resumption of heavy physical labor.

CHANCROID -- Ninety-four cases of Hemophilus Ducreyi were diagnosed and treated. The lesions produced by these organisms cause considerable incapacitation; balanitis, and painful inguinal adenopathy bring the patient into the clinic more rapidly than any other of the venereal diseases. The lack of induration, multiplicity of lesions, purulent response, and pain on palpation are consistent findings. Most of the patients with this disease have not been circumcised. Sulfadiazine brings about prompt improvement. Occasionally the course of treatment must be continued beyond the prescribed 28 Grams. A local disease, with few systemic manifestations and no permanent sequelae, uncomplicated chancroid offers few diagnostic problems.

LYMPHOPATHIA VENEREUM -- In contrast, lymph gland involvement of lymphopathia venereum is often accompanied by moderate to severe systemic complaints. Chills, malaise, generalized lymphadenopathy and temperature elevation accompany the local inguinal buboes. Unless diagnosed very early these glands become matted and adherent to the underlying skin and so are easily differentiated from the discrete, firm, movable nodes that follow the chancre of syphilis. Our diagnoses are made on the results of the Frei test. Perhaps others in this command have had experience with this diagnostic antigen. We have seen cases which fitted the clinical description of this disease yet the Frei reaction is negative. We mean to imply that different vials of the material seem to show varying degrees of specificity. The eleven cases treated at this hospital have responded nicely to sulfadiazine. Those having suppurative lymphadenopathy were treated with aspiration. Complete healing of the inflamed nodes was observed.

To complete the list, we have had one case of granuloma inguinale. The patient was a Negro soldier, admitted with a chronic penile ulcer. Numerous darkfields, ducreyi and giemsa stains were done, all being negative. No response was obtained with penicillin and sulfadiazine therapy. Since the lesion was located on a markedly redundant foreskin, a consultation to the genito-urinary service was forwarded and the patient was circumcised, the operation including the ulcer site. This specimen was sent to the 406th Laboratory for pathologic study. Meanwhile the suture line in the region of the ulcer broke down and presented a low grade granulomatous process which resembled the previous lesion. This time it was decided to treat the patient with streptomycin and he was given a total dose of six grams of the drug over a three day period. Rapid, permanent healing was noted. I might add that earlier this year there appeared in the literature the report of effective treatment of granuloma inguinale with this drug. Our patient was discharged from the hospital when the pathologic report of granuloma was returned. Our patient has remained asymptomatic even though the dosage prescribed by investigators has been arbitrarily set at 20 Grams.

MISCELLANEOUS lesions accounted for the remainder of the admission. Vincent's infection, scabies, contact dermatitides, eczematoid reactions, furunculosis, superficial fungous infections and traumatic abrasions with secondary infection were common. Before treating these lesions, routine smears and darkfield examinations were done and a negative serology report obtained. In cases where chemotherapy was deemed advisable, sulfadiazine in doses of three to four grams daily was prescribed. The Vincent's organism, an exception to the general rule was treated with small doses of penicillin, a repeat serology being obtained before the patient was discharged. Routinely serologies are drawn on these non-venereal cases monthly for a period of three months to insure against the possibility of missing a syphilitic infection. Certain observers state that Vincent's infection does not occur through sexual contact. We have seen many cases of this sort either singly or in combination with a venereal disease. If allowed to progress for several days without treatment, severe balanitis

occurs. I would state that in this command such cases do occur as a result of sexual relations with infected women.

Concerning scabies we are always on the alert to do darkfields on lesions when they involve the external genitalia. The open lesion produced by the *Sarcoptes scabiei* provides an excellent entrance site for the *Treponemas*. Particular emphasis upon examination of the genitalia should be stressed if the ward officer plans to give intramuscular penicillin in cases of scabies where acute secondary infection has occurred. If possible chemotherapy in these cases should be withheld until the serology has been reported and other laboratory performed.

DRUG REACTIONS -- We have been extremely fortunate in not having many or severe drug reactions. Only one patient under treatment for syphilis with penicillin developed severe urticarial reactions; this was controlled by anti-histaminics. This particular patient has received penicillin on two subsequent occasions without the development of a similar sensitivity response. None of our patients on sulfadiazine have shown untoward effects. On the other wards though, several cases of erythema multiforme have been observed and two cases of anuria following ingestion of large amounts of sulfadiazine have been admitted.

The diagnosis of any of the venereal diseases depends entirely upon the laboratory. Consequently good laboratory personnel are essential for rapid accurate handling of patients. In one year our technicians have done thousands of darkfield, gonorrhea, ducreyi and giemsa examinations. One microscope is used entirely for darkfields, a second instrument for the various smears. No darkfield examination is declared "negative" until the technician has searched scattered fields for a minimum period of ten minutes. Three negative darkfield, ducreyi or gonorrhea smears are necessary before any particular lesion or discharge is pronounced negative. This, coupled with an initial serology, has been effective. Our greatest difficulty has been with patients who have tried to treat the lesions prior to being seen in the clinic.

The medical profession is not entirely satisfied with the serologic tests now in general use. The names Wassermann, Kahn, Kolmar, Hinton and Eagle are familiar to all. Each of the varied tests has been evolved in an attempt to provide the clinician with a laboratory aid, more sensitive than its predecessor in the diagnosis of syphilis. Each has its advantages, but as yet there is no one test that will effectively rule in the diagnosis of syphilis to the exclusion of those diseases which may also cause a "false" positive reaction. We are certain that several diseases are frequently associated with such serologic changes, particularly malaria, infectious mononucleosis and infectious hepatitis. Immunizations frequently cause transient change in the serology tests. Many other conditions may be responsible. The book Modern Clinical Syphilology by Stokes (4) presents a nice condensation of most of the disturbances which can give rise to a "false" positive test.

In addition to these biologic causes it has been found that technical "false" positive reactions may occur. Improper refrigeration, bacterial contamination, improperly cleaned glassware and tubes, etc., may render results unreliable.

Moore and his associates (3) have suggested the following procedures when biologic false positive serologic tests for syphilis are suspected:

- Careful history;
- Careful physical examination for evidences of acute infection preceding the questionable serologic test, with special reference to lymph nodes, spleen and lungs;
- Search of blood smears for malaria parasites when indicated;
- Blood smears for infectious mononucleosis as well as the heterophile antibody test;
- Determination of the sedimentation rate;
- Repetition of the serologic tests by as many methods as possible, with verification by more than one laboratory;
- Prolonged serologic follow-up;
- And finally, examination of the cerebrospinal fluid if a decision is in doubt.

Possibly before long a specific test will be devised. The cardiolypin test now undergoing experimentation appears to be a step in this direction.

Penicillin administered for other purposes can be a source of confusion in the diagnosis of syphilis (2). "The dual effectiveness of penicillin against *Treponema pallidum* and *Neisseria gonorrhoeae* complicates the problem of the early diagnosis of the former disease. The incubation period of gonococcal urethritis is usually three to five days and exceptionally one to two weeks; the incubation period of primary syphilis is ten to ninety days with an average of three weeks.

Consequently in simultaneous infections the urethritis may be treated with penicillin while the patient is in the incubation stage of syphilis. For various reasons also treatment may be given when a chancre is already present. The lesion may be missed because of its unusual location, as in intrameatal, intraurethral or extragenital chancres; the chancre may be concealed by inflammatory phimosis. In uncomplicated gonococcal urethritis the usual dose of penicillin is 300,000 units. This dosage may have several potential effects on coincidental early syphilitic infection. When given during the incubation period of syphilis it is conceivable that the syphilitic infection may be cured; but it is more likely that a chancre will appear perhaps after a prolonged period of incubation, or that a completely symptomless infection will result. Treatment during the primary stage of syphilis may be anticipated to heal the lesion prematurely, following which the lesion may recur, the disease may be rendered asymptomatic or a secondary eruption may appear; or the action of the penicillin on the treponemas may evoke a febrile Herxheimer reaction. With the purified penicillin now available, fever as a toxic manifestation due to contained pyrogens, is extremely rare.

"Consequently every patient treated for gonococcal urethritis should be informed that a concomitant early syphilitic infection may co-exist; he should be urged to report immediately in the event that a genital lesion or cutaneous eruption appears and should be warned against sexual intercourse until the observation is completed. The management of the case should include,

(1) a careful pretreatment inspection for lesions, with repeated darkfield examinations;

(2) a serologic test for syphilis at the first visit, repeated at least monthly for three and preferably four months;

(3) the recording of the temperature at two hour intervals, during the penicillin therapy, to detect a low grade febrile Herxheimer reaction."

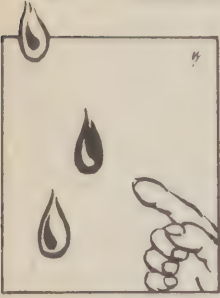
SUMMARY -- A summary to a discussion of this type should deal with methods of prevention rather than cure. However, the problems of prevention are more complex and involved than the mere issuing of mechanical or chemical prophylactic items. As mentioned in the introduction, our efforts in the field of prevention have been hampered by the presence of numerous infected girls. It has been suggested that we try to provide the enlisted men with an environment similar to that prevailing in the United States. We are all agreed that such an atmosphere in this occupied territory would be beneficial. Yet in examining the parental background of many of these patients we find time after time that the home situation is anything but satisfactory. Divorce, alcoholism, and poverty have formed the foundation upon which too many of our present soldiers have been reared. We must remember, too, that these patients were in the adolescent stage during the war years when family life was disrupted. In either case, the lack of proper parental guidance at such a critical stage of development has resulted in a weakening or absence of moral standards.

Our efforts should be to make up to the soldier these missing standards. The true solution to this problem will not be forthcoming during our tour of duty, but, when and if found, will ultimately include a broad and extensive integration of economics, sociologic, medical and religious concepts.

BIBLIOGRAPHY:

- (1) Leifer, W. and Martin S. P. "Effect of Penicillin on Course of Early Syphilis", J.A.M.A. 130:202, 1946
 - (2) Moore Joseph - Penicillin in Syphilis: C. C. Thomas, Springfield, Ill.
 - (3) Moore J. E., Eagle H., and Mohr C. F., "A Suggested Method of Approach to the Clinical Study of Biologic False Positive Tests for Syphilis", J.A.M.A. 115: 1602, 1940.
 - (4) Stokes J., Beerman H., and Ingraham N, Modern Clinical Syphilology. W. B. Saunders and Company, Philadelphia, 1945, Chap. IV, Pg. 87.
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XII Comparative Studies on Mailed Spinal Fluid Specimens, (Abstract) Cannefax, George R.; Parkhurst, George R.; and Bowman, Richard W.: Journal of Venereal Disease Information, January 1949



Observations during the past five years at the Hot Springs Medical Center, Hot Springs, Arkansas, have indicated that follow-up spinal fluid specimens received by mail frequently showed total protein and Kolmer test results to be higher than the results obtained on the same patient while under treatment at the Medical Center. Subsequent referral to the Medical Center of several of these patients for complete spinal fluid recheck and possible retreatment showed total protein and Kolmer test results to be comparable (or nearer normal) to the spinal fluid findings obtained during the patients original stay at the Medical Center. Such an elevation of results on mailed specimens might possibly be interpreted as "falsely" elevated spinal fluid total protein and Kolmer values.

A review of these observations led to the possibility that a similar condition might exist for other spinal fluid specimens mailed to the Medical Center. From March 1, to April 15, 1948, a study was conducted to determine the extent and degree of variation in spinal fluid findings that might exist between (1) a portion of the identical spinal fluid specimen tested within two hours after collection from the patient and (2) specimens mailed to the laboratory from outlying areas within the state at a later period of time. The spinal fluid was divided into three portions:

- (1) Into a sterile test tube for examination within two hours. This specimen was not stoppered after spinal fluid was put into the tubes.
- (2) A second portion was placed into a sterile Vacutainer.
- (3) A third portion was put into a sterile tube with a nonsterile cork stopper.

The control specimen was held at room temperature and was tested within two hours after collection. The Vacutainer and cork stoppered portions were held at room temperature for a period of 1 - 7 days before being carried to a distant point by car and mailed back to the laboratory. The interval between collection and testing of mailed specimens varied from 2 - 9 days.

Any total protein estimation above 24.0 mg. percent was considered abnormal. The abnormal protein content portions were as follows: Control 17.9%; Vacutainer 22.6% and the nonsterile cork portions 59.4%. The average total protein content increased remarkably in the 2-4 day specimens but not much significant additional increase in the 5 - 7 or 7 - 9 day specimens.

The average increase in the total protein estimation in the Vacutainer portion of the specimens was 13.4% while the average increase in the cork stoppered portion was 54.3%. The percentage of mailed specimens in which increases in total protein were found was 87.7 for Vacutainers and 96.2 for cork stoppered containers.

With regard to the Kolmer complement fixation test a corresponding discrepancy was observed in the degree and number showing positivity. Forty-nine percent of the specimens mailed in cork stoppered containers showed positivity in the Kolmer test as compared with 11.3% of the corresponding controls. This study shows that the laboratory results on specimens mailed in nonsterile containers frequently do not present a true picture of the spinal fluid findings. This might suggest that an undetermined number of people, who have been diagnosed asymptomatic neurosyphilis and started treatment, may not have neurosyphilis but that their spinal fluid specimens were mailed in nonsterile containers with an accompanying lapse of time prior to examination, and either the Kolmer test showed a "false" positive or the total protein estimation went above the maximum of normality for the laboratory performing the test.

XVI. Proposed Oral Thermometer Technique by Major Mildred I. Clark, ANC, Chief Nurse,
Medical Section, GHQ, FEC



PURPOSE:

The body temperature is considered one of the three important cardinal symptoms of disease. Since the recording of an accurate temperature for any patient is highly important, it is our primary objective as nurses to insist that inaccuracies be avoided and an aseptic technique be followed. Careful study and numerous discussions have resulted in the various methods presently being used.

The following proposed oral thermometer technique is recommended with a view toward standardization of this procedure in Army hospitals in the Far East Command.

GENERAL CONSIDERATIONS:

Oral temperatures are taken at periodic intervals, according to the instructions of the physician or head nurse, namely four-hour, two-hour, every hour or half-hour temperatures may be ordered. Temperature of the body indicates the balance between the production and loss of body heat. Body temperatures vary with different organs and areas, with the time of day, and the condition of the air. The clinical thermometer is used as an instrument to measure the temperature of the body. The mercury in the clinical thermometer remains stationary at registration point until it is shaken down. The thermometer scale is a graduated device to indicate the temperature; namely, Centigrade, Fahrenheit and the Reaumur which are in use. The Fahrenheit and Centigrade are most commonly used in the Army hospitals. The clinical thermometer should be handled with great care because of the danger of its contraction, thus rupturing the internal walls of the bore and rendering it useless. Clinical thermometers intended for mouth use are made with long narrow bulbs. Never judge a clinical thermometer by its appearance. Accuracy beyond question is necessary if the patient is to be protected. Small bulb thermometers are difficult to shake down because of the small bore and consequent light columns of mercury. Thermometers should be kept away from heated radiators or water 110°F or more. The patient should not be permitted to handle the thermometer at any time.

PROCEDURE FOR TAKING ORAL TEMPERATURES:

The tip of the tongue should be lifted by the patient to allow the nurse to insert the bulb of the thermometer under the tongue, the teeth and lips then being closed around it. The patient should be instructed not to bite upon the thermometer, or breathe strongly through the mouth while the temperature is being taken, as air passing around the bulb or glass will cause it to register a lower temperature. It should be left in the mouth for two (2) minutes.

The following tables of temperature equivalent are commonly used:

36° Centigrade	equals	96.8° Fahrenheit
37° Centigrade	equals	98.6° Fahrenheit
38° Centigrade	equals	100.2° Fahrenheit
39° Centigrade	equals	102.2° Fahrenheit
40° Centigrade	equals	104.0° Fahrenheit
41° Centigrade	equals	105.8° Fahrenheit
42° Centigrade	equals	107.6° Fahrenheit

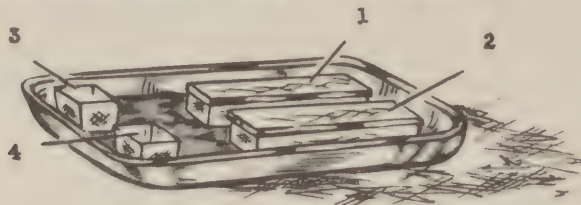
The procedure for converting Centigrade to Fahrenheit is to multiply by 9/5 and add 32. Example: 40°C x 9/5 equals 72 plus 32 equals 104°F. To convert Fahrenheit to Centigrade, subtract 32 and multiply by 5/9. Example: 104°F minus 32 equals 72 x 5/9 equals 40°C.

In order to maintain and establish a procedure the following should be remembered:

1. Keep a sufficient number of thermometers available to allow one for each patient.

2. Careful supervision by the nurse in the taking of temperatures should be exercised.
3. A daily check of thermometers should be made for serviceability.
4. Clean thermometers should be kept in containers so designated and clearly marked to obviate possible contamination.

WARD TRAY SET-UP FOR TAKING TEMPERATURES (Diagram I)



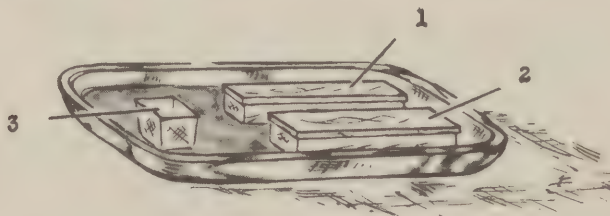
The ward tray for taking temperatures as illustrated above should contain the following items:

1. One small catheter tray cushioned with two (2) 4" by 8" gauze sponges to prevent chipping and breakage. The above tray (diagram I) should contain sufficient number of clean, dry thermometers.
2. Another small catheter tray of the same size, with gauze sponge placed on the bottom and containing green soap solution should be adjacent and used as a contaminated thermometer receptacle.
3. A small cardboard-covered sputum cup containing clean cotton squares for wiping thermometers should be the third item on the ward temperature tray.
4. The fourth container on the tray should be a cardboard sputum cup for disposal of the waste cotton.

After the thermometer is removed from the patient's mouth, it should be wiped with clean cotton and read immediately, shaken down, and immersed in green soap solution and placed in a longitudinal position in the catheter tray as illustrated.

The tray is then carried to the Utility Room.

THE SET-UP TRAY USED FOR CLEANING THERMOMETERS (Diagram II)



The following is a list of items needed to carry out the above procedure and may be procured through Army Medical Supply channels:

Tray, catheter, enamel, 7-938-211 with lid.
 Cup, sputum, paper 100x, 7-779-000
 Tray, instrument, enamelware, 2 x 8 $\frac{1}{2}$ x 10, N939975

The tray used for cleaning thermometers is kept in the Utility Room where the cleaning should be carried out as follows:

1. First remove all thermometers from the soap solution (Diagram I, container 2). Then rinse thermometers in tepid water.
2. Protect and store thermometers by immersing in a 2% phenol solution in a small catheter tray with gauze cushion (Diagram II, container 1).
3. Adjacent to the catheter tray with the phenol solution is another small catheter tray which should contain a 70% alcohol solution (Diagram II, container 2). Approximately 1 hour prior to use, the number of thermometers required should be removed from the phenol solution and placed in the 70% alcohol solution.
4. Immediately before use, thermometers should be removed from the 70% alcohol solution, thoroughly dried with cotton and placed in the container on the ward tray as described in Diagram I.

CARE OF TRAY:

Enamelware should be thoroughly cleaned and sterilized; all solutions should be restocked daily and a gauze cushion should cover the bottom of all catheter trays for protection of the thermometers.

SPECIAL PRECAUTIONS TO BE OBSERVED OR AVOIDED:

1. Thermometers are not to be issued on an individual basis nor kept in the patient's room near the bedside.
2. Avoid the use of containers with water on the tray as it is misleading and errors may result from such a practice.
3. Avoid the use of water glasses or tumblers without proper covers as thermometers should be completely immersed in solution.
4. The use of gauze placed on the bottom of container with solution is considered more practical than cotton as loose fibers may adhere to thermometer.
5. Chemical cleaning of thermometers should not be accomplished while taking temperatures as aseptic technique cannot be accomplished in a matter of seconds after use.
6. The nurse should not leave the room while the thermometer is registering. Mouth temperatures should not be taken if the patient is unconscious, delirious or dyspneic as such recordings are not accurate since thermometers may be broken and cause serious injury.
7. Temperatures should not be taken for ten minutes or more after the patient has had hot or cold food or drink.

SUMMARY:

1. By use of the above method, it is felt that a satisfactory aseptic technique can be carried out in taking temperatures.
2. The method described prohibits the possibility of cross-infection.
3. A greater number of thermometers can be maintained with less breakage.

With the application of the techniques as presented above, it is believed that considerable improvement in the quality of this aspect of nursing care will result.

References:

- "The Art and Science of Nursing" by Ella L. Rothweiler, MA, RN
 "Lippincott's Quick Reference Book for Nurses", Fifth Edition, 1943

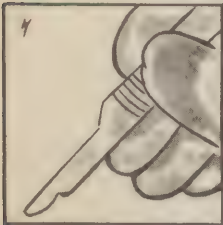
XVII. Diagnosis of Malaria by Lt. Col. W. D. Tigertt, Commanding Officer, 406th Medical General Laboratory, Tokyo, Japan



Because of the world wide distribution of its units the Army has long been concerned with the diagnosis of various tropical diseases. One of the most important of these is malaria. It should be a matter of considerable pride to the Army and especially members of the Medical Department that its recommended methods of diagnosing malaria should be considered the method of choice. Dr. A. J. Walker (Tulane University) in a recent article (The Teaching of Malaria. Amer. Jour. Trop. Med. 28(6):777-785) points out that "the thick film is the only practical method for the diagnosis of malaria and other blood parasites" and adds that a survey of 22 of the most recent texts on parasitology, tropical medicine, hematology and laboratory methods showed that only three urged the definitive diagnosis of malaria by means of the thick film technique. These three were Mackie, T.T., Hunter, G.W. III and Worth, C.B.; A Manual of Tropical Medicine; Russell, P.F., West, L.S., and Maxwell, R.D.; Practical Malariology; and Simmons, J.S. and Gentskow, C.J.; Laboratory Methods of the United States Army. At the time these books were being written every one of the authors was in Army uniform. Of the eight authors half have returned to civilian life while the others are either still on active duty in the Army or have been retired.

Dr. Walker terminates his discussion as follows "If we give the student a relatively simple satisfactory thick film technic and a simple explanation of how to interpret what he finds, he will automatically discard thin blood smears as a diagnostic procedure."

XVIII. Complications as the Result of Appendectomies Observed at the 49th General Hospital by Col. Norman W. Anderson, MC, Chief of Surgery, 49th General Hospital, Tokyo, Japan



During the past eighteen months 680 appendectomies were performed at this hospital, with no deaths. Forty-one perforated appendices, in which appendectomy was performed, are included in the series, an incidence of 60 per thousand.

Ten complications have resulted from appendectomies performed at this hospital during the period, only one being of a serious nature. This complication occurred in a 19 year old soldier who had been operated upon nine days previously for acute gangrenous appendicitis with perforation. While sitting in the hospital movie he suddenly developed severe pain in his chest. Examination showed the classical picture of phlebothrombosis involving the calf of the right leg and x-ray evidence of pulmonary infarction. He was treated by ligation and severance of the right superficial femoral vein with no further complications. Of the nine remaining complications two were atelectases involving the lower left lobe and upper right lobe, respectively. Both occurred within twenty-four hours of operations and were suspected clinically by abnormal elevation of temperature and pulse. Forced breathing, coughing, and activity in bed brought about re-expansion of the lung within a few hours. One pelvic abscess resulted from the removal of an acute suppurative appendix in spite of continuous chemotherapy and antibiotics following surgery. The abscess was detected two weeks following operation and was not felt two weeks later. Treatment consisted of bed rest, high protein diet, and continuation of drug therapy. The other complications were superficial wound abscesses occurring in the fatty subcutaneous tissue between the external oblique fascia and skin. In general, the occurrence of a fever usually 99-100, on the 5th postoperative day suggests wound abscess. Our treatment has been evacuation of the pus, insertion of a soft rubber drain into the area for 48 hours, local use of heat, and after this period the application of chloresium ointment. Cultures taken from superficial wound abscesses have been predominantly escherechi coli. Healing takes place within a few days and has not delayed recovery nor caused significant defects in the abdominal wall. It has been our policy to drain the subcutaneous fatty layer for 48 hours with a soft rubber drain in all perforated appendices and in most gangrenous and some suppurative cases at the time of operation. We have felt that this procedure has reduced the incidence of post-operative wound infections. At operation following closure of the fascial layer the subcutaneous space is washed out copiously with warm saline solution, thereby removing globules of fat, old blood and debris. Such procedure it is felt also reduces the incidence of subcutaneous tissue infection.

In none of the forty-one cases of perforated appendicitis did a single pelvic abscess occur postoperatively that could be demonstrated to be present by clinical examination or x-ray. Our treatment at this hospital for the perforated appendix has been as follows: (1) Careful and

meticulous handling of tissue, aided by adequate exposure and walling off of the appendoceleal area prior to removal of the appendix; (2) Copious lavage with warm saline solution of the appendoceleal area after its removal and the use of constant suction during the procedure; (3) Continuous use of the Levine Tube with Wangersteen Suction for five days postoperatively or until bowel sounds are well established; (4) The judicious use of parenteral fluids such as 5% glucose in normal saline, 5% glucose in distilled water, and 5% amigen, protein hydrolysate, solution to maintain fluid, electrolytic and caloric requirements particularly the proteins and carbohydrates; (5) Parenteral administration of adequate amounts of vitamin "C" and vitamin "B" to stimulate wound healing (fibroblastic response) and aid in carbohydrate metabolism; (6) Parenteral use of penicillin 100,000 units q. 3 hours intramuscularly and sulfadiazine 2.5 Grams q. 12 hours intravenously followed by 250 c.c. of 1/6 Molar Lactate Solution to alkalize the urine and prevent acid crystalluria.

There have been three additional cases of ruptured appendicitis in which only an exploratory laparotomy was performed with closure. It was felt at the time of operation that the process had been well walled off and any surgical interference would have only spread the infection. All of these cases responded well to the above postoperative regime. We advised all three individuals to return for removal of the appendix at a later date. Two returned after an interval of three months at which time the appendix was removed. The number of adhesions found on the secondary operation was minimal. In one case the tip of the appendix was found adherent to the lateral pelvic wall and would have formed an axis for subsequent volvulus of the bowel had it not been removed.

We do not drain the peritoneal cavity. As you know, Dr. John Finney of Baltimore stopped draining the peritoneal cavity fifteen years ago. He pointed out that any peritoneal drain was sealed off within a few hours and its insertion merely stimulated the formation of peritoneal adhesions. In the perforated appendices we use chromic catgut throughout because we feel that the use of a non-absorbable suture in an infected area merely invites trouble. We have not used the Fowler's position because we feel that it is of questionable value. It has been shown that with the return of peristalsis the peritoneal fluid is in constant motion from right to left and from below upward along the general lines as the normal intestinal peristalsis. Complications such as liver abscess, subhepatic abscess, and lung abscess are the result, for the most part, of venous drainage in the region of the suppurative process. The vessels of the posterior parietal peritoneum near the appendix go to the vena cava. If the appendix lies on the peritoneal surface near the iliac vein, infection is carried through the vena cava to the heart and lung abscess may develop. The vessels of the mesentery carry septic emboli via the portal vein to the liver.

During this same period of time there have been admitted to this hospital as complications following appendectomy, six large pelvic abscesses, two fecal fistulae, one subhepatic and one subdiaphragmatic abscess. In general all of these cases were treated for a period of time similar to the procedure outlined for the postoperative treatment of the perforated appendix. All of the pelvic abscesses and the subhepatic abscess responded well to conservative treatment without incision and drainage. One of the pelvic abscesses pointed in the right femoral canal and drained spontaneously, two days after admission. This case was that of a five year old child of Japanese extraction who had had an appendectomy performed in a Japanese hospital two weeks previously. Without exception all of the cases were evacuated to this hospital because of early signs of intestinal obstruction. We have been impressed by the resultant well being of the patient and subsidence of the abscess after decompression, correction of fluid, electrolytic, caloric and protein metabolism, and continuance of the antibiotics and chemotherapy. On an average the patient is quite well after two weeks and by the end of four weeks there is no evidence of pelvic abscess. The only abscess that has not responded to conservative treatment, in our hands, since the use of penicillin and sulfadiazine was that of a young soldier, admitted in a critical condition, with a huge subdiaphragmatic abscess. He had had an appendectomy followed by generalized peritonitis, bronchopneumonia, bilateral empyema, fecal fistula and subdiaphragmatic abscess. It was felt that conservative treatment was contraindicated and a partial rib resection with thoracotomy and closed drainage was performed. He responded very nicely to the surgical drainage and has been discharged to duty. The two cases of fecal fistulae were treated with hot moist dressings, chloresium irrigations and the daily application of a chloresium ointment gauze wick directly into the fistulae to stimulate granulation tissue formation and healing. One of the fecal fistulae had an associated hepatitis. One of these fistulae required subsequent surgical closure. At operation the fecal fistula tract was found to be lined with mucosa preventing closure. For those of you who are not familiar with chloresium a word might be said about it. Chloresium is a chlorophyll product much like packed red blood cells. It is neither bactericidal or bacteriostatic but has the property of stimulating the body cells to produce rapid granulation. We have found it very

effective for the rapid closure of infected areas such as ischio-rectal abscesses, osteomyelitic cavities, and use it routinely in our postoperative fistulectomy cases.

Those of use who have performed many appendectomies have learned that an appendectomy can at times be very difficult and fraught with many complications either immediate or many months or years later. We have learned that the appendix is most variable in its location, the more abnormal locations being due to non-rotation, non-descent or complete retrocolic fusion of the appendix to the posterior parietal peritoneum. We have learned that the appendix can simulate any organ over which it lies or is adjacent to. For example, the inflamed appendix lying over a ureter will simulate kidney pathology. Here the smooth muscle of the ureter undergoes some paralysis with back pressure of urine with resultant urinary distention of the renal pelvis and pain referred to the back. The urine will show albumen and some red cells due to the contact of the acute appendix with the ureter. A carefully taken history, thoroughly performed physical examination and intravenous pyelograms will help one arrive at a correct diagnosis. Similarly when the appendix is inflamed and lies on top or posterior to the terminal ileum there will be suppression of activity of the smooth muscle and motor power of the ileum. The result is symptoms of obstruction with distribution proximal to the paralyzed zone and x-ray evidence of adynamic ileus. This type of patient is usually admitted with a diagnosis of intestinal obstruction but here again a carefully taken history and physical examination plus a knowledge of surgical physiology will help one make the correct diagnosis. Although we have taken out very few normal appendices, I definitely feel that it is better to operate and remove a normal appendix than allow it to rupture. When there are signs of an acute surgical abdomen, especially rebound tenderness, we have found it well to operate. Only a few weeks ago one of our young fine surgeons, who was on emergency surgical call at night, made a diagnosis of acute appendicitis and operated. What he found was not a diseased appendix but a twisted ovarian cyst on the right. When we suspect a ruptured appendix we generally do a right paramedian incision because we can obtain better exposure; it provides for more careful handling of tissue with less spread of infection, and there is less likelihood of occurrence of postoperative hernia. We prefer to do a right paramedian incision in the very obese individual and always perform it in the female as there are so many other conditions of the pelvis that can simulate appendicitis, especially pelvic inflammatory disease. In the majority of cases the McBurney type of muscle splitting incision is used.

We have seen a fair number of postoperative hernias following appendectomy performed in civilian life prior to entrance into the military service. In most of these cases the skin incision was quite extensive. We have felt because there has been muscle weakness in the involved area that the ilio-hypogastric motor nerve to the internal oblique and transversus muscle had been out at the previous operation. In some there has been present an associated inguinal hernia. It is therefore important to know about the anterior division of the 12th thoracic and first lumbar nerves. These two nerves come out of the cord at the spinal canal, split into posterior and anterior branches and then join each other near the anterior superior spine. They then split into an upper ilio-inguinal branch, which is sensory to the spermatic cord and a lower ilio-hypogastric motor nerve. These nerves lie on the muscle of the internal oblique and you must look for them.

I would like to say a few words about intestinal obstruction following appendectomy due to errors in surgical technique. (1) The Ileo-Pad of Fat. There is nothing from the jejunum to the large intestine on the anti-mesenteric border which is constant and present in all people but the ileo-pad of fat. It differs from other fat in that it has a few blood vessels which give it a slightly reddish tinge in the yellow. It varies in length from two to seven inches. One opens the abdomen, picks up the cecum, locates the ileo-pad of fat and between is the appendix. The ileo-pad of fat is on the anterior surface of the ileum to the appendix. The mesentery is on the posterior surface of the ileum to the appendix. When you take out the appendix and ligate the meso-appendix unless you dissect off the ileo-pad of fat you will grasp it in your hemostats, especially if the cecum is fixed. This will result in kinking of the ileum. The ileo-pad of fat on the anti-mesentery border is like the fin of a fish and one cannot bring the fin together without bending the body of the fish. If you disconnect the ileo-pad of fat from the meso-appendix when you ligate it the ileo-pad of fat will skip up posterior to the ileum and you avoid fixation of the ileum and the cecum, thereby preventing kinking. (2) Wide Purse String Suture. Another common error in this same location is too wide an application of the purse string suture with resultant kinking of the ileum and intestinal obstruction. One must remember that the appendix in most cases comes off about three quarters of an inch from the ileo-cecal valve. Do not make the purse string suture any wider than you need to. (3) Failure To Invaginate The Appendix Stump Sufficiently. Occasionally one fails to invaginate the appendix stump sufficiently and one borrows not only from the ileo-pad of fat but from the medial boarder of the cecum or from the mesentery. The ileum is then obstructed from its own spur. If you need to borrow always borrow from the caudal portion of the cecum. (4) Inadequate Removal Of Appendix Stump. It is important to recognize invagination of the appendix a certain distance into the cecum, the so-called sub-

serosal appendix. Here one must cut the serosa at the base of the appendix to the cecum, then one can mobilize the invaginated appendix and pull out the cecum. Failure to remove all of the appendix may result in another attack of appendicitis in the appendix stump with perforation as was seen recently at this hospital. (5) Adhesive Bands Due To Non-Inversion Of The Appendix Stump. Acute intestinal obstruction has been seen in one case at this hospital six weeks following removal of the appendix without inversion.

All of the above complications have been seen at this hospital. A discuss of the individual cases while interesting will not add much to the basic principles discussed.

Regional Ileitis and Appendectomy: We have encountered several cases of regional ileitis during the interval of this report. In all appendicitis was suspected. In only one case was the appendix removed. In all others the abdomen was closed without further surgery. As a rule appendectomy in ileitis is contraindicated. If one can be certain that the cecum is not involved and the ileitis is distal to it prophylactic appendectomy may be indicated according to some authorities. Personally, I have seen several cases of regional ileitis and find it difficult to determine the extent of the pathology. The bowel may look good from the appearance of the serosa but pathologically the process has already invaded the segment. I would say that appendectomy should not be performed in the face of a regional ileitis for fear of a resultant fecal fistula. In cases of regional ileitis the appendix is often acutely inflamed along with the general process but it is not appendicitis in the sense that we think of this disease. Removal in such cases will probably result in a fecal fistula.

A word about inversion vs non-inversion of the appendiceal stump. (1) If we do not invert the stump but amputate and ligate what happens? (a) 60% of appendices are back of the cecum but not retroperitoneal. Therefore, six out of ten become plastered to the peritoneum and nothing happens. (b) 40% are in front of the cecum. Here four out of ten have a possibility of attachment to mesentery, omentum, or small bowel and raw surface of the stump, and may get bowel obstruction.

(2) If we invert the stump what happens? (a) Do not have to think of blow out or adhesions. (b) Objection is raised that the dead end of the inverted appendix occasionally forms a cystic diverticulum or abscess which may rupture into the peritoneal cavity, but usually it ruptures into the lumen of the bowel with no sequelae.

What happens when we do appendectomy? We crush, then tie with a tight ligature, apply carbolic acid and wash off with alcohol. "We embalm, cremate, and bury". We now have dead tissue and nothing is deader than dead. We all know that if bacteria cannot kill tissue they cannot live.

What can we do? Do invert, don't crush, don't tie, put in purse-string suture (Dunbarton Method). If you must tie, tie lightly with one loop of suture in tie and it will loosen after you invaginate the stump and draw the purse-string suture tight.

I have presented some of the complications that have been observed following appendectomy and attempted to indicate the reasons for their occurrence. If I have stimulated your thoughts and made you realize that appendectomy is a serious operative procedure I will have considered these few remarks to have been worthwhile.

PART III

STATISTICAL

Evacuation:

1. Tabulated below are the number of patients evacuated from the major commands to the zone of interior during the four report weeks in January and the number of patients awaiting evacuation as of 28 January 1949:

	<u>BY AIR</u>	<u>BY WATER</u>	<u>TOTAL</u>	<u>PATIENTS AWAITING EVACUATION</u>
JAPAN	35*	2*	37*	180
MARBO	31	0	31	45

PHILCOM	20	0	20	15
RYCOM	20	1	21	5
FAR EAST COMMAND	106	3	109	245

* Includes 2 patients who originated in Korea.

2. During the four report weeks in January, 52 patients were evacuated from Korea to Japan, by air transportation, for further hospitalization and disposition or for onward evacuation to the ZI. As of 28 January 1949, 4 patients in Korea were awaiting evacuation to Japan.

3. Evacuations of military personnel per thousand strength for the period 1 January 1949 to 28 January 1949 were as follows:

JAPAN	.24
KOREA	5.2
MARBO	1.3
PHILCOM	.76
RYCOM	.81
FEC	.49

Hospitalization:

1. The bed status as of 28 January 1949 was as follows:

	<u>Total T/O Beds Authorized</u>	<u>Total T/O Beds Established</u>	<u>Total T/O Beds Occupied</u>
JAPAN	4,650	4,600	2,978
KOREA	300	300	149
MARBO	800	535	265
PHILCOM	1,600	1,520	902
RYCOM	750	443	270
FEC	<u>8,100</u>	<u>7,398</u>	<u>4,464</u>

2. The percent of T/O beds and established beds occupied as of 28 January 1949 was as follows:

	<u>Percent Authorized T/O Beds Occupied</u>	<u>Percent of Established Beds Occupied</u>
JAPAN	62	63
KOREA	50	50
MARBO	33	50
PHILCOM	56	59
RYCOM	36	61
FEC	55	47

3. Admission rates per 1,000 troops per annum for the four week period ending 28 January 1949 were as follows:

	<u>FEC</u>	<u>JAPAN</u>	<u>KOREA</u>	<u>MARBO</u>	<u>PHILCOM</u>	<u>RYCOM</u>
All Causes	653	789	826	312	567	305
Disease	602	735	771	271	506	271
Injury	51	54	55	41	61	34
Psychiatric	15	17	7.8	13	16	5.0
Common Respiratory Disease	87	121	17	25	74	17
Influenza	.92	1.2	1.3	0	1.2	0
Primary Atypical Pneumonia	6.3	7.2	2.6	4.3	2.3	10
Common Diarrhea	2.7	2.2	0	3.0	8.2	.62
Bacillary Dysentery	1.2	.12	0	0	9.3	0
Amebic Dysentery	1.3	.36	2.6	0	7.6	0
Malaria	2.0	.36	0	2.4	9.3	3.1
Infectious Hepatitis	5.3	6.0	9.1	1.2	8.2	.62
Mycotic Dermatoses	4.2	6.0	0	0	2.3	3.1
Rheumatic Fever	.50	.72	0	0	0	.62
Venereal Disease	138	167	310	19	68	100

I N D E X

	<u>PAGE</u>
Army Nurse Corps and Women's Medical Specialist Corps, Regular Army.	5
Comparative Studies on Mailed Spinal Fluid Specimen.	12
Complications as the Result of Appendectomies Observed at the 49th General Hospital	16
Cutaneous Diphtheria	2
Diagnosis of Malaria	16
Experience with Venereal Disease	7
Future Consideration for Promotion of 1st Lieutenants, MC and DC	3
Japanese B Encephalitis.	3
Medical Corps Officers - Attention	1
Modification in Permanent Filing of Register of Dental Patients.	5
Neuropsychiatric Form.	4
New TB MED on "Management of Venereal Diseases".	3
Organization of the Medical Section.	1
Overtreating Dermatology Patients.	1
Proposed Oral Thermometer Technique.	13
Recent Department of the Army and FEC Publications	6
Statistical.	19
Special Food Items for Patient Feeding	5
Women's Medical Specialist Corps Officer Procurement Program	5



Major General Bethea extends an invitation to all personnel of the Medical Department to prepare and forward, with view to publication, articles of professional or administrative nature. It is assumed that editorial privilege is granted. Copy should be forwarded so as to reach the Medical Section, GHQ, FEC, not later than the 10th of the month preceding the issue in which publishing is desired.

Capt. Vincent I. Hack, Editor